

REMARKS

I. Introduction

Applicants appreciate the granting of a telephone interview with the Examiner, which took place on October 6, 2008. During the interview, Applicants discussed the § 103 rejections set forth in the pending Office Action of claims 1-8. The Interview Summary (PTOL-413) lists "Matt" McQueen as participant (Applicant's representative). For the record, Applicant's representative / participant's name is --Nathaniel-- McQueen.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

II. The Objection of IDS filed on June 18, 2008

The June 18, 2008 IDS was objected to because it is alleged that a copy of CN 1186357A and the Chinese Office Action, with English translation, issued in Chinese Pat. Appl. No. CN 2004-80039418, have not been received. However, both of these documents are listed on the USPTO PAIR system and as such, the Office has received these documents. In addition, the Examiner alleges that although the International Search Report for PCT/JP2004/018264 was received, it was not listed in any IDS. However, it is not required to list the search report in the IDS, only the references contained therein. As such, Applicants respectfully submit that the IDS and all the references cited therein be considered.

III. The Rejection of Claims 1-8 Under 35 U.S.C. § 103

Claims 1, 3-5 and 7-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mizutani (US 2003/0180605) in view of Reichert et al. (USP No. 6,217,623) and Takayama et al. (JP 09-035738); and claims 2 and 6 were rejected as being unpatentable over Mizutani, Reichert

and Takayama in further view of Komatsu et al. (US 2002/0146626). Applicants respectfully traverse the pending rejections for at least the following reasons.

With regard to the present invention, independent claims 1 and 5 recite a lithium ion secondary battery and a method of producing the battery, respectfully, includes an electrode group that comprises...a porous film which comprises a filler and a binder, a positive electrode and a negative electrode which are wound around a winding core, and the positive electrode and/or the negative electrode have/has, on the initial winding side, a region where an active material layer is carried on neither side of a core member and an adjoining region where the active material layer is carried on only one side of the core member.

One feature of the present disclosure is that at least one of the positive and negative electrodes has a porous film comprised of a binder and filler and on the initial winding side, a region where an active material layer is carried on neither side of a core member and an adjoining region where an active material layer is carried on only one side of the core member. As a result of this feature, it is possible to effectively avoid breakage or falling off of the active material layer or the porous film near the edge of the electrode.

It is admitted in the Office Action that Mizutani fails to disclose the specified composition of the porous film layer. Reichert is alleged to remedy this deficiency, by teaching a porous film layer comprising a filler and a binder (see, col. 5, lines 32-39 of Reichert). The Examiner then alleges that it would have been obvious to replace the porous film of Mizutani with that of Reichert. However, it is respectfully submitted that this rejection is improper, as there is no valid basis to make the proposed combination.

The stated objective of Mizutani is to eliminate a component that does not contribute to power generation in order to provide a non-aqueous electrolyte battery which has a high energy density. To achieve this objective, Mizutani teaches a positive electrode and positive electrode laminate 5 disposed on one face of a separator 1 extending from one end to about the center portion of the separator, and a negative electrode and negative electrode laminate extending on the other side of the separator from the other end to about the center region. The separator, having the positive and negative electrodes is then wound around the approximate center to form an electrode assembly (see, paragraph [0013] and Figs. 1 and 7 of Mizutani). Thus, the electrode assembly does not require a winding core composed of a wound end of the separator or a winding core material (another component) provided in the approximate center part.

Also in Mizutani, the separator 1, the positive electrode laminate 5 and the negative electrode laminate 6 are wound around the jig 21 to form the wound electrode assembly (see paragraphs [0067]-[0068] of Mizutani). Thus, from this description, it is clear that a separator that is composed of one large component having an area greater than the total area of positive and negative electrodes is an essential feature of the battery of Mizutani.

However, if a porous film containing a filler and a binder is used, such as in Reichert, the porous film can only be formed on one or the other of the positive and negative electrodes. In other words, the positive and negative electrodes cannot be disposed on both faces of one porous film. Thus, if the porous film of Reichert were used in place of the separator of the wound battery of Mizutani, the battery of Mizutani would be rendered inoperable for its stated purpose of eliminating a component that does not contribute to power generation in order to provide a non-aqueous electrolyte battery which has a high energy density. Furthermore, Takayama fails to remedy this deficiency.

As is well known in patent law, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). As the porous film disclosed in Reichert would render the wound battery of Mizutani inoperable for its intended purpose, there is no suggestion or motivation to make the proposed combination of Reichert with Mizutani or Takayama. Accordingly, Applicants respectfully submit that the § 103 rejection of claims 1 and 5 over Reichert, Mizutani and Takayama be withdrawn.

IV. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 5 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

V. Conclusion


Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

Application No.: 10/576,421

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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